

WYOMING WATER ASSESSMENT AND PROTECTION PROGRAM (SWAP)



SOURCE WATER ASSESSMENT PROGRAM EXECUTIVE SUMMARY

Source Water Assessment Prepared For:
Hanna

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SOURCE WATER ASSESSMENT SUMMARY FOR Hanna

PWS Source Water Assessment Summary

The Hanna Water System serves a permanent population of 900 through 400 service connections. The source is a surface water intake on Rattlesnake Creek which is located on the western slope of Elk Mountain approximately 13 miles south of the town. The system is gravity fed from the intake to the distribution system, requiring power only to run the water treatment plant.

At the water treatment plant, water from the raw water reservoir is pre-treated with ferric chloride for coagulation before passing through twin conventional multi-media filters (anthracite coal and garnet sand). Disinfection takes place after filtration and before the clear well with gas chlorination. The plant is entirely automated. Under normal operations, the plant runs only about 8 hours a day for 5-6 days per week. A 1,000,000 gal. steel storage tank completes the system.

In general, the Town of Hanna water sources rated high for land use susceptibility. The high ratings occurred because much of the land surrounding the water source is forest. The overall point source contaminant susceptibility rating is low due to the lack of contamination sources being present within the delineated zones.

Delineation Methods

Hanna is a community water system that obtains water from Rattlesnake Creek on the western slope of Elk Mountain. Because the community obtains its water supply from a surface water source, Lidstone used surface water delineation methods to determine the source water area for the intake.

Surface Water Sources

With its headwaters on the western flank of Elk Mountain, Rattlesnake Creek flows westward toward Rattlesnake Pass. Hanna's community water system intake is located near the base of the mountain. Additional information on this surface water source is enclosed on the attached Surface Water Information Sheet.

As shown on the source water delineation map, contaminant inventory zones for this source were delineated to include all areas that may contribute water to the watershed upstream from the diversion. Zone 2 includes a 1,000 foot buffer along both banks of Rattlesnake Creek that extends upstream from the intake to the eastern end of the perennial stream. Zone 3 includes the remaining watershed upstream from the intake.

Integrity Summary

The Hanna water system serves a permanent population of 900 through 400 service connections. The intake was constructed before 1983, when less stringent construction standards were required by the State of Wyoming. Records indicate that the intake is properly screened and able to protect against potential contaminants. As shown on the Integrity Summary Table, the Hanna water system intake received an integrity score of 4. This value directly reflects the fact that the intake was constructed prior to 1983 and the conveyance length is over a mile in length.

Water Source Sensitivity Summary

The Hanna water system serves a permanent population of 900 through 400 service connections. The source is a surface water intake on Rattlesnake Creek. As shown on the Source Sensitivity Summary Table, the intake received a sensitivity score of 10.

The intake received the maximum sensitivity score for two reasons. The first reason is because it obtains water from a surface water source. The second reason is that laboratory analysis of water samples from the system within the last five years detected several contaminants that are listed on EPA's primary and secondary drinking water standards. These include sodium and sulfate among others. Despite detection, these contaminants were generally detected at concentrations below the EPA's maximum contaminant levels.

Water System Susceptibility Rating

Susceptibility is defined as the potential for a public water supply to draw water contaminated at concentrations that would pose a threat or concern to human health. In general, the Town of Hanna scores high for land use susceptibility because much of the land surrounding the water source is forested. Forested areas were included to evaluate the potential risks of increased runoff and water quality problems following forest fires. The overall point source contaminant susceptibility rating is low due to the lack of contamination sources being present within the delineated zones. Susceptibility ratings for each type of potential contaminant source are summarized on the attached susceptibility tables.

A review of your PWS's routine water analysis results revealed that one or more chemicals that are considered contaminants in drinking water were detected at some time within the last five years. Chemical detections have a large impact on your PWS's sensitivity score because it may indicate that there is a pathway for contaminants to reach the water supply. However, it is likely that these chemicals are present only in small amounts and are not a danger to your health. Some of these chemicals may also occur naturally in water.

For more information about which chemicals were detected, please contact the PWS for a copy of the most recent Consumer Confidence Report or water analysis results. Chemical detections at levels that are a concern to human health are reported on the EPA's website: http://www.epa.gov/enviro/html/sdwis/sdwis_query.html. To see if your PWS has exceeded the federal primary or secondary drinking water standards, just click on the State of Wyoming and then type in the name of your PWS. Consumer Confidence Reports are prepared by the PWS on a yearly basis. The reports should include information about any chemicals found in the

water, even those found at very low levels. Please contact Kim Parker at DEQ, 307-777-7781, or WARWS for assistance. You may also contact EPA to find out what contaminants were detected. You may have to fill out a Freedom of Information Act request to obtain the water test results for your PWS. Please call EPA's Safe Drinking Water Hotline at 1-800-426-4791.

**POINT SUSCEPTIBILITY SUMMARY TABLE
FOR Hanna
Point Source Susceptibility Summary**

It may appear from the results of this point source susceptibility summary table that your system has too many PSOCs influencing the final ratings. In some cases, a specific PSOC falls within a specific contaminant inventory zone shared by multiple wells or intakes. When this is the case, that PSOC will be scored for each intake. For example, an underground storage tank may appear within a contaminant inventory zone shared by four different wells. This would cause that single storage tank to be entered into the table four times, or once for each well or intake.

Point Source Type	Low	Medium	High
None Identified	N/A	N/A	N/A

- * Illustrates the number of PSOCs in a particular rating class for all water sources
- * N/A - Not Applicable